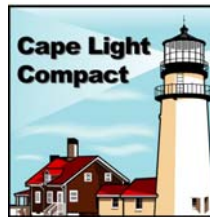


Energy Efficiency 2009 Plan Overviews

December 9, 2008



Agenda

1

EE Plan objectives and PA Budgets

2

Residential Update

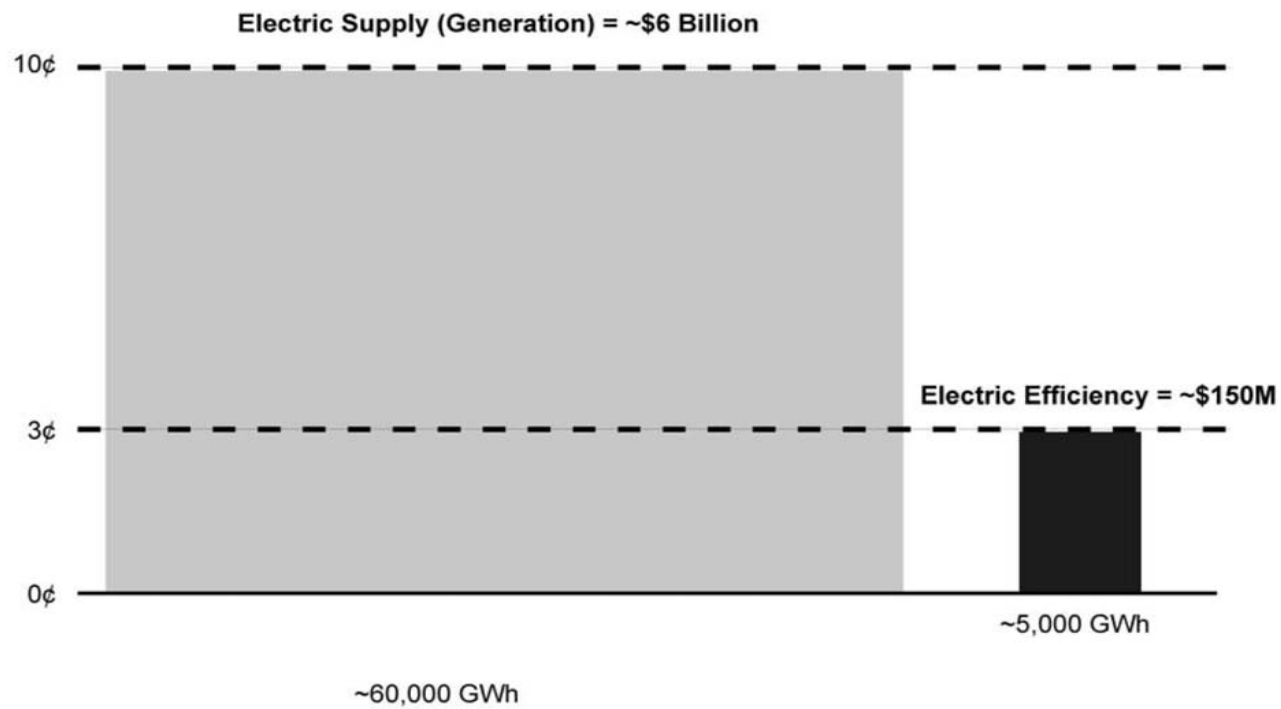
3

C&I Update

4

Wrap-up

Energy Efficiency is an Under-Utilized Resource



Source: Environment Northeast

*Amount of Energy Supplied or Saved
In New England*

Massachusetts a proven leader in Energy Efficiency

- MA has been 3rd highest state for electric EE spending with budget of \$122million.
- MA has the 4th highest natural gas EE program spending relative to natural gas consumption in the nation.
- MA is 5th highest per capita spending on EE (behind VT, CA, CT, RI).

Massachusetts has focused on these goals for Energy Efficiency

- Ensure funds are equitably allocated among customer classes
- Ensure adequate support for “lost opportunity” efficiency programs
- Give emphasis to statewide market transformation programs
- Provide weatherization and efficiency services to low income customers
- Ensure programs and portfolio are cost effective

Program administrators leverage partnerships to advance programs

Examples Partnerships
GasNetworks
Consortium for Energy Efficiency
Northeast Energy Efficiency Partnerships
Department Of Energy
Environmental Protection Agency
American Council for an Energy Efficiency Economy
ENERGY STAR Homes Joint Management Committee
New Buildings Institute

Benefits
Transform Markets
Market Power
Best Practices
Stakeholder buy in
Cost Effectiveness
Innovation

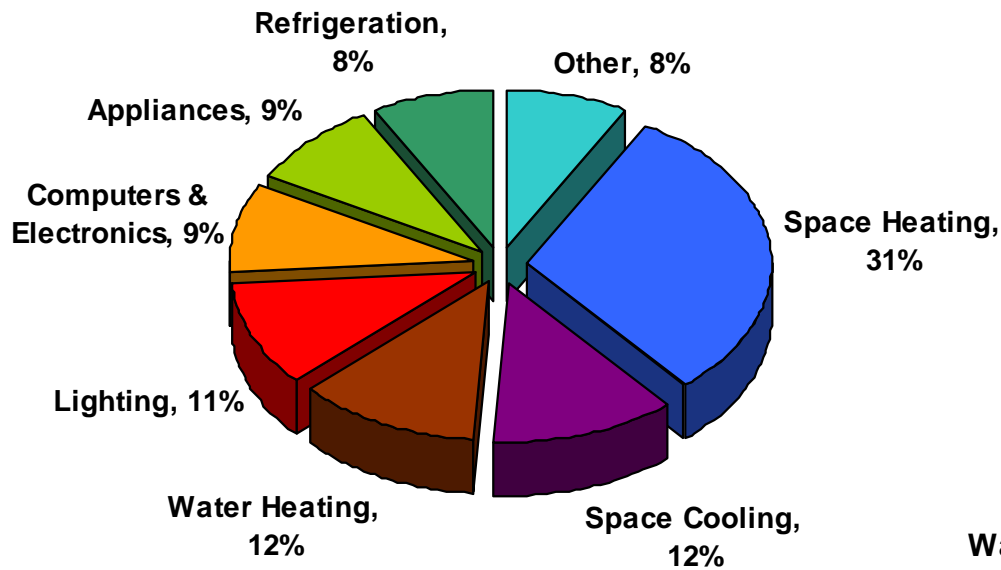
Program administrators must overcome barriers of awareness, availability, accessibility and affordability.

Stages of Growth

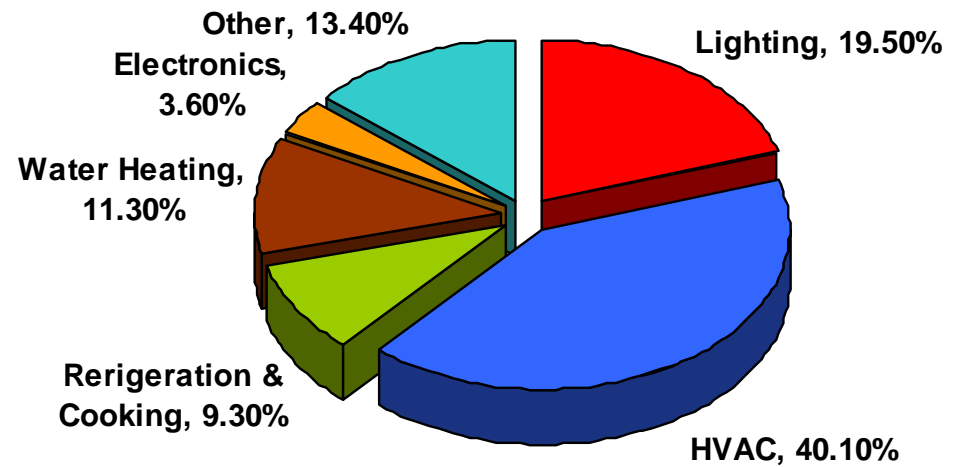
Stage	Characteristics	Barriers
Introduction	Limited number of customers Few market channels	Awareness Affordability Accessibility Availability
Growth	Increasing number of customers Increasing number of channels	Affordability
Maturity	Supported by Code Ubiquitous	None

Energy Savings for Residential and Commercial Sectors

Residential Energy Use



Commercial Energy Use



Proposed 2009 Electric Budgets – By Company and Sector

Sector	NSTAR	National Grid	Unitil	WMECo	CLC	Commonwealth Total
Residential	\$19,483,693	\$27,992,000	\$643,979	\$3,965,299	\$4,625,647	\$56,710,618
Low Income	6,636,652	13,859,000	228,577	2,049,777	1,532,176	24,306,182
C&I	48,117,167	43,470,000	1,709,468	6,663,113	3,909,812	103,869,560
Total	\$74,237,512	\$85,321,000	\$2,582,024	\$12,678,189	\$10,067,635	\$184,886,360

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Residential	\$19,483,693	\$27,992,000	\$643,979	\$3,965,299	\$4,625,647	\$56,710,618
% increase	39.9%	39.7%	142.4%	64.6%	74.5%	44.3%
Low Income	6,636,652	13,859,000	228,577	2,049,777	1,532,176	24,306,182
% increase	13.7%	25.9%	28.1%	41.2%	100.1%	26.4%
C&I	48,117,167	43,470,000	1,709,468	6,663,113	3,909,812	103,869,560
% increase	47.4%	35.9%	56.2	40.1%	61.1%	42.5%
Total	\$74,237,512	\$85,321,000	\$2,582,024	\$12,678,189	\$10,067,635	\$184,886,360
% increase	41.7%	35.4%	67.8%	47.1%	72.3%	40.7%

*Note – Increase is based on projected 2008 program costs with increased spending proposal

Proposed 2009 Gas Bridge Budgets – By Company and Sector

Sector	Bay State Gas	Berkshire Gas	National Grid	New England Gas (includes North Attleboro)	NSTAR	Unitil	Commonwealth Total
Residential	\$1,536,457	\$441,455	\$8,300,000	\$289,480	\$1,562,284	\$55,000	\$12,184,676
Low Income	1,153,913	98,024	5,300,000	146,600	739,448	78,000	7,515,985
C&I	2,409,872	184,000	6,400,000	145,534	1,203,494	65,000	10,407,900
Total	\$5,100,242	\$723,479	\$20,000,000	\$581,614	\$3,505,226	\$198,000	\$30,108,561

*Bridge Budgets: May-December for all Gas Utilities except National Grid (2009 calendar year)

Projected 2009 Electric and Gas Savings

Sector	Electric MWh's	Gas MMBtu's
Residential	225,944	322,617
Low Income	15,002	58,844
C&I	286,315	464,779
Total	527,261	846,240

527,264 MWh's = 262,000 Tons of CO₂ = removing 32,000 cars from the road

846,240 MMBtu's = enough natural gas for 6,770 homes for an entire year

RESIDENTIAL PROGRAMS

ELECTRIC

- New Construction
- ENERGY STAR HVAC
- Multi-family
- MassSAVE
- ENERGY STAR Lighting
- ENERGY STAR Appliances
- Residential Education

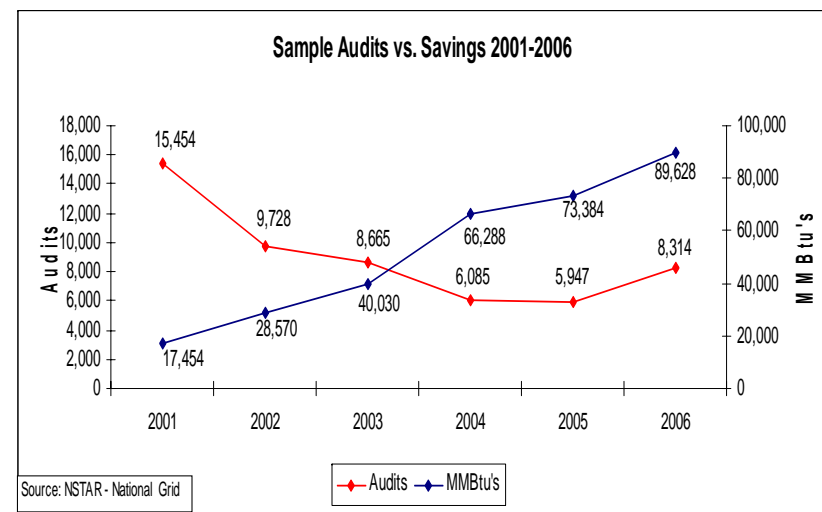
GAS

- New Construction
- High Efficiency Heating
- High Efficiency Water Heating
- MassSAVE
- ENERGY STAR Thermostat
- ENERGY STAR Windows
- Weatherization

MassSAVE Program

Highly touted Home Energy Assessment program - offers incentives on installation of insulation, air sealing, ENERGY STAR lighting products, refrigerators, heating & water heating equipment, and windows

- In recent years, program has transitioned from one-dimensional educational audits to a comprehensive consumer/energy efficiency investment approach
 - Ex. 2001 – 13% of budgeted dollars resulted in energy savings: 2007 = 61%
- Expected growth in consumer savings and investment for 2009
 - Anticipated ~ 25% increase in home energy assessments
 - Use of HEAT Loan funds to help support consumer investments in major energy saving measures
 - New initiatives being considered
 - Eg. Solar thermal, Micro CHP



Residential R&D

- **Deep Retrofit Pilot**
 - Objective: Investigate potential energy savings of approx. 30%-50% through deep retrofits of existing homes.
 - Deep Retrofits typically include:
 - Exterior wall super-insulation build-outs
 - Extensive whole house air sealing
 - High efficiency heating, water-heating, windows, and lighting



Arlington, Ma

ENERGY STAR Lighting & Appliance Program

Lighting Program - *Supports the sales, promotion, and use of ENERGY STAR residential lighting products.*

- Biggest and most cost-effective program
- Utilizes upstream distribution buy-down model
- Shift towards specialty CFL bulbs – dimmable, 3-ways, recessed

Appliance Program - *Supports the sales, promotion, and use of ENERGY STAR residential appliance products. Best known for offering appliance rebate via coupons*

- Shift towards upstream buy-downs and retailer cooperative appliance promotions
- New in 09 - Limited time “retail” Refrigerator rebate, Pool Pump rebate, Room A/C Buy-down, Retailer- Smart Power Strip initiative



Low Income

Delivers energy-efficient products and services directly to the homes of eligible low-income customers.

- Existing Homes - whole-house energy saving approach
 - Insulation and weatherization, lighting, appliances, heating equipment repairs and upgrades
- New construction – promotes ENERGY STAR building practices for sustainable savings
- Established “Best Practices” program administrator working group
- New initiatives focusing on replacing inefficient heating systems

COMMERCIAL & INDUSTRIAL PROGRAMS

ELECTRIC

- Lost Opportunity-New Construction
- Existing Buildings
- Small Commercial

GAS

- ENERGY STAR Thermostat
- Infrared Rebate
- High Efficiency Heating
- High Efficiency Water Heating
- Efficient Food Service Equipment
- Custom

Examples of Electric Commercial & Industrial Programs

Offers technical assistance and incentives for the lighting, motor, controls, HVAC and customer measures.

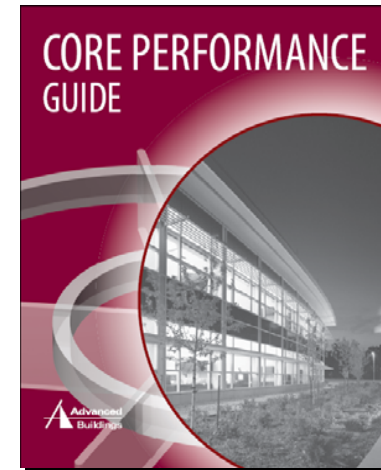
- Lost Opportunity-New Construction – Time sensitive projects such as new construction and equipment replacement. Incentive of up to 75% of incremental cost.
 - Increase average incentive by 15%
- Existing Buildings – Retrofit projects implemented for energy savings. Incentives up to 50% of full installed cost.
 - Increase average incentives by 15%
 - Municipal Program
- Small Commercial – direct install program targeting business <200 or 300 kW; 70% incentive. (WMECO 35% incentive)

Municipal Program

- Green Communities Act has a focus on municipalities
 - Green Communities Act permits contracting for energy efficiency work without bid
- Municipals often lack technical expertise and capital
- Solution
 - Streamlined, full-service offering including technical assistance, installation services and incentives.
 - Financing and commissioning services also available.
- Energy Management Pilot for Wastewater and Drinking Water Plants, in coordination with Mass DEP

Advanced Buildings Suite of Products and Training Initiatives

- Simple integrated design strategies and building features that go beyond commercial energy efficiency code and promotes Indoor Air Quality: Commercial Buildings 20,000- 100,00 s.f.
- Enhances new building performance 20-30% ASHRAE 90.1-2004
- National recognized program
- Fully supported with instructional materials, guidebooks, website resources



Massachusetts Collaborative for High Performance Schools

Promotes Green Design and Construction Practices in New Schools



High Performance Equipment and Systems Installed

- High Performance Envelope and Daylighting
- Optimized HVAC distribution system
- High efficiency gas boilers
- High Efficiency Lighting Systems and Controls
- Other “Green” and Renewable Systems Technologies



Commercial Gas High Efficiency Heating Equipment

Promotes installation of high efficiency heating equipment in C&I sector

- Program offers an array of incentives on high efficiency heating and water heating equipment
 - Complete portfolio of rebates ranging from traditional heating equipment (boilers and furnaces) to infrared heating
 - Custom program for large C&I heating, controls, and processing applications
 - Piggy-back of water heating incentives
- Combined Heat & Power incentives
 - Opportunity to partner with electric
 - Example – already established “first in nation” combined electric and gas ECM* furnace rebate

*Electronic Commutated Motor

Looking forward...

We are excited about rapidly expanding EE

- Comprehensive, integrated program offerings
- Deeper market penetration
- Additional new technology offerings
- Addressing urgency of climate change & carbon footprint
- Leaders in Nation